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AUTHOR Brown, Lyn S.; Ryan, G. Jeremiah
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ABSTRACT

One of the many requirements for students majoring in Bible in the undergraduate program at Philadelphia College of Bible (Pennsylvania) is writing papers. The papers are designed to develop research skills, sharpen writing skills, encourage critical thinking, and promote problem-solving skills. However, students are not adequately prepared to write their papers. The first year English Composition course attempts to develop research skills but spends only limited time on research strategy. The director of the Learning Resource Center is given one hour to present a session on research strategies and give a brief library tour. This study compares the results of teaching three hours of research skills with the results of teaching one hour of research skills. Four sections of first year English Composition students were given a pre-test to gauge their research skills. Two sections received one hour of library instruction, and two sections received three hours of library instruction. A post-test was administered to all students. No significant difference was found in the post-test results between students who received one hour of library instruction and students who received three hours of instruction. Possible reasons for the findings are discussed. Appendices include the pre- and post-test, one and three hour curriculums, one and three hour worksheets, and test scores. (Contains 17 references.) (Author/SWC)

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ED 402 931

THE RELATIONSHIP OF TIME TO EFFECTIVENESS IN RESEARCH SKILLS INSTRUCTION FOR STUDENTS AT PHILADELPHIA COLLEGE OF BIBLE

Research Methodologies

Lyn S. Brown
Philadelphia College of Bible

G. Jeremiah Ryan
Philadelphia Cluster

A practicum report presented to Programs for Higher Education in partial fulfillment of the requirements for the degree of Doctor of Education

Nova Southeastern University
February, 1995

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Abstract of a practicum report presented to Nova Southeastern University in partial fulfillment of the requirements for the degree of Doctor of Education

THE RELATIONSHIP OF TIME TO EFFECTIVENESS IN RESEARCH SKILLS INSTRUCTION FOR STUDENTS AT PHILADELPHIA COLLEGE OF BIBLE

by

Lyn Stephen Brown

January, 1995

One of the many requirements for students majoring in Bible in the undergraduate program is the writing of papers. These papers or reports are designed to develop research skills, sharpen writing skills, encourage critical thinking, and promote problem-solving skills. The problem is that the students are not adequately prepared to write their papers. The freshman English Composition course attempts to develop research skills with limited time spent on research strategy. The director of the Learning Resource Center is given one class hour to present a short session on research strategies along with a brief library tour.

The purpose of this research study was to compare the results of teaching of three class hours of research skills with the current one hour of teaching.

Six steps were followed to complete this research practicum. First, the sample population was identified which consisted of all four sections of freshmen English Composition students. Second, the pre-test and the post-test were designed. Third, the pre-test was administered. Fourth, the research skills sessions were taught for one hour to two sections of the English Composition course and for three hours to the other two sections. Fifth, all four sections were given a post-test that asked the same questions given in the pre-test. Sixth, the scores were collected and analyzed.

There was no significant difference in the results of the post-test between those who were taught for one hour and those who received instruction for three hours. Recommendations include using a different testing instrument and continued future testing.

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Chapter 1

INTRODUCTION

Philadelphia College of Bible is a private non-denominational college offering traditional and non-traditional programs of study. The college began in 1913 to provide an opportunity for men and women to learn more about the Bible and to train them to more effectively minister in local churches. By 1970, the college had expanded to include professional programs in music, teacher education, and social work.

The bachelor of science in Bible degree is designed primarily for high school graduates and is intended to build a foundation of religious instruction for graduate study and ministry opportunities. The program is designed to give the student the skills necessary to function in today's world with all of its demands for effective utilization and communication of information.

Nature of the Problem

One of the many requirements for students majoring in Bible in the undergraduate program is the writing of papers. These papers or reports are designed to develop research skills, sharpen writing skills,

encourage critical thinking, and promote problem-solving skills. These skills are the classic components of what is defined as information literacy. The skills needed for each of the papers assigned by individual professors should ideally be taught and reinforced throughout the curriculum.

The problem is that the students are not adequately prepared to write their papers. The freshman English Composition course attempts to generally encourage research skills with limited time spent on research strategies and the utilization of specific tools within a library. The director of the Learning Resource Center is given one class hour to present a short session on research strategies along with a brief library tour.

Purpose of the Study

The purpose of this research study was to compare the teaching of three class hours of research skills with the current one hour of teaching. The dependent variable was the post-test scores and the independent variable was the hours of instruction. The results of this study are to be used to justify increased exposure by the students to instruction on the use of the

library.

Significance to the Institution

The exponential growth in information resources and the new demands of the information age have put increasing demands upon faculty and students to access appropriate information quickly, process that information with critical thinking skills, and to communicate both verbally and in writing a product that is practical, interesting, and meaningful. This research study begins to address the issue of time needed by students for research skills instruction as they write their papers. Students need to be taught lifelong skills that will enhance their chances for survival in this information age.

Relationship to the Seminar

This research practicum is related to the Research Methodologies seminar in that it utilizes the principles taught in the use of inferential statistics. It includes the prediction of the effectiveness of a solution and its effects using scientific procedures.

Research Question

The research question for this study is, "What is

the difference between teaching college students research skills for one hour compared to three hours?"

Research Hypothesis

The research hypothesis is that the teaching of research skills to college freshmen for three class hours is far more effective than one hour of instruction.

Chapter 2

REVIEW OF THE LITERATURE

Overview

There are many terms and phrases that are being used today to describe the process of educating college students in research skills. Information literacy is one of these terms that has become very popular among librarians and information specialists. Paul G. Zurkowski is credited with first using the term in 1974 in his work on information service (Ridgeway, 1990, p. 645). The 1989 Final Report of the American Library Association Presidential Committee on Information Literacy was written in response to A Nation at Risk, a report that completely ignored the important role libraries could play in the information age. The 1989 report not only reacted to the lack of respect, it also went on to define information literacy and its impact upon an individual.

Breivak and Gee (1989) observe that the roles of libraries must change in this information age. They declare that libraries must be more effective as they wrestle with the information challenges of the future.

In the case of college libraries, they should be empowered to assist their colleagues in teaching and administration to achieve their goals and objectives. In the case of educating students in our college, several chapters address issues that are related to the academic library and its relationship with students.

Curran (1991) insists that librarians must be an integral part of what is defined as the information literacy chain. Step 4 in the information literacy chain is the ability to interpret, organize, and synthesize information. Step 5 is the ability to use and communicate information, which Curran points out has long been considered outside the responsibilities of librarians. He encourages librarians to be both proactive and cooperative as they expand their role in the information literacy chain. In other words, library tours and short sessions on how to find information in the library will not be enough in this information age.

Importance of Definition

Metoyer-Duran (1992, p. 364) noted that creating information literacy is more than simply teaching library skills. It is a process that enables students

to effectively access appropriate information and to apply information to problems found in life. Tribal community colleges were surveyed to see if they were effectively promoting information literacy among their students.

Naito (1991, p. 293) states that students need the ability to understand what information is, when they need to access it, how and where to access it, and how to use it. The Final Report of the American Library Association Presidential Committee on Information Literacy (1989) goes even further in stating that ". . . a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information. Ultimately, information-literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to fine information, and how to use information in a way that others can learn from them" (p. 1).

Students should be expected to efficiently access information, critically evaluate it, and effectively manipulate and communicate knowledge to others. Rader (1990) argues that ". . . information-literate students

are able to understand the importance of information in our society, to articulate and focus their information needs, to understand the structure and form of information, to recognize the points of access to information, to develop strategies for information gathering, to evaluate and analyze information content, to synthesize, manage, and report their results, and to evaluate their search process" (p. 880). A policy on information literacy was adopted at Cleveland State University, with the librarians and faculty working together to incorporate the concept of information literacy into the curriculum.

How to Measure Outcomes

Foster (1993, p. 345) in his article on information literacy expresses his misgivings on how to measure literacy and illiteracy. He sees the term as simply a public relations ploy to make the library world feel more important and more necessary for the well-being of the world.

Authors such as Naito (1991) simply assume that the various components of information literacy such as research skills instruction can be measured through pre- and post-testing. Surveys can also be

administered to measure the effectiveness of the teaching or a Senior Project can be assigned that would require the use of research skills. Self-assessment is highly suggested by Greer (1991), but that cannot be totally reliable.

Breivik and Gee (1989, p. 46) discuss various ways of measuring research skills, which include competency tests given at the University of Wisconsin-Parkside and credit courses at California State University at Long Beach and Wayne State University. The authors go even further by giving examples of active faculty participation in assignments that require research skills, critical thinking skills, and the ability to reflect this process in writing or by giving an oral presentation.

The struggle to define outcomes was revealed in the efforts of a blue ribbon commission for the Minnesota State University System (Farmer & Mech, 1992, p. 28). Examination scores at the end of a block of instruction on research skills led to so much criticism that they quickly adopted pre- and postmeasures. Even then some educators expressed some dissatisfaction with the giving of examinations, when the students needed to

demonstrate the application of information to real world situations. It was recommended that performance indicators be adopted that would measure skill and knowledge, such as participation in field experiences, community service projects, or diverse learning opportunities.

Relationship to the Practicum

The instruction of research skills to college freshmen must include the participation of library staff, a designed curriculum than encompasses all aspects of information literacy, and a means to measure outcomes. This practicum is an attempt to promote the involvement of library staff in research skills instruction through a comparison in post-test results and their relationship to the amount of time dedicated to research skills instruction.

Chapter 3

METHODOLOGY AND PROCEDURES

Data Collection

Five steps were followed to collect data for this research practicum. First, the sample population was identified. It consisted of all four sections of freshmen English Composition students totalling eighty-four in number. Two sections or fifty-four students received one hour of instruction and the other two sections or thirty students received three hours of instruction.

Second, the pre-test and the post-test were designed by the director of the Learning Resource Center and examined by the three teachers of the English Composition course (See Appendixes A and B). The composition of both tests supported the learning objectives of both the one hour and three hour sessions. They were pre-tested by students in a non-credit English grammar course and their results were examined by the director prior to the administration of the pre-test and the post-test to the four sections of English Composition students.

Third, the pre-test was given to determine the level of research skill competencies of the four sections of the English Composition course. The pre-test was used to determine if the control group and the experimental group were similar enough to proceed with the practicum without additional statistical work.

Fourth, the research skills sessions were taught for one hour to two sections of the English Composition course and for three hours to the other two sections (See Appendixes C through F). Both courses focused upon research strategies, a library tour, and hands-on demonstrations. Fifth, all four sections were given a post-test that included the same questions given in the pre-test.

Data Analysis

The scores were collected and analyzed using SPSS for Windows. The null hypothesis was that there would be no significant difference in effectiveness in teaching research skills between students attending an one hour session and students participating in three hours of instruction. The statistical test was the independent t-test using the mean scores of the post-test from the two groups. An ANCOVA was to be used if

the pre-test results varied too much between the groups. The level of significance was set at .05 as it would be a balance between a need for a very stringent level of significance and a concern for sufficient data to support additional hours of research skills instruction. The region of rejection was based upon a two-tailed test as the hypothesis was non-directional. The one alternate hypothesis was that the teaching of research skills to college freshmen for one class hour would be far more effective than those receiving three hours of instruction. Therefore, the alternative hypothesis would be the direction of the difference and that region would be the area rejected.

Definition of Terms

For the purposes of this practicum, research skills are defined as the ability to access and evaluate information for a given need. A research skills program is the staff, faculty, and administration of the college working together to increase an student's awareness of information sources, train them to critically assess the information that is gathered, instruct them on how to efficiently access information, and encourage them to effectively

manipulate and communicate what they have learned to people in the world around them.

Assumptions

A number of assumptions were included in this study. First, it was assumed that the director of the Learning Resource Center had the experience and knowledge to teach the research skills component of the English Composition course. Second, it was assumed that the director would have the expertise to develop the pre-test and the post-test that were used as the instruments in this practicum. Third, it was assumed that the population variances of the two groups of students would not be significant enough to affect the scores on the pre- and post-tests.

Limitations

This study was limited in that it was specific to eighty-four students taking the English Composition course at Philadelphia College of Bible in the Fall semester. Not all of the students attending the course were tested because of absences, especially if a student did not attend all three hours of lecture and demonstration in the group that received three hours of research skills instruction. The results are only

externally valid when the students are randomly selected from the entire freshmen class. The skills needed for the completion of writing assignments should ideally be taught and reinforced throughout the college curriculum, but we focused upon the research skills component of the English Composition course.

Chapter 4

RESULTS

The director of the Learning Resource Center and the three faculty members worked together to design and administrate a pre-test and a post-test on research skills for the students in the English Composition classes. The pre-test was given during the first ten minutes of the first session for both the one-hour students and the three-hour students. The post-test was given in the class period following the last session of instruction. The one-hour students took their post-test at the beginning of the following class period while the three-hour students completed their post-test in the class period following the third session.

The scores from both the pre-test and the post-test are arranged by the instructor and the amount of time that was spent in teaching research skills. These scores can be found in Appendix G.

The individual scores were analyzed using SPSS for Windows for the calculations. Tables 1 and 2 give a more concise comparison of the results, combining the

scores of the four classes into the two groups. The control group was composed of the students receiving the one-hour session on research skills. The experimental group was made up of the students who received three hours of instruction on research skills.

Table 1

Results Of t-test

	Value
t-value	1.24
df	82.00
2-Tail Sig	.219
SE of Diff	.434
CI for Diff	(-.326, 1.400)

The t-test was used to test the null hypothesis and it indicates that there is not a statistically significant difference between the scores of the control group and the experimental group of students. Our failure to reject the null hypothesis is further amplified in the comparisons in Table 2.

Table 2

Comparisons Between Groups With Post-test Scores

Results/Values	1 Hour Group	3 Hour Group
Mean	12.704	12.300
Median	13.000	13.000
Mode	14.000	13.000
Std Deviation	1.997	1.622
Variance	3.986	2.631
Range	8.000	7.000
Minimum	7.000	8.000
Maximum	15.000	15.000
25 Percentile	11.750	11.000
50 Percentile	13.000	13.000
75 Percentile	14.000	13.000

The means, standard deviations, and variances were used to test the null hypothesis. Table 2 provides a comparison of scores between the two groups and statistical data necessary to test the null hypothesis.

Chapter 5

DISCUSSION, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Discussion

The principles of research skills instruction as defined in numerous articles and books were incorporated into the design of the research skills instruction sessions and the research skills tests. Duran's (1992) insistence that research skills instruction must expand to include effective appropriation of information and the application of the problems found in life.

Curran (1991) insisted that librarians had to be an integral part of the curriculum and instruction at any institution. The faculty that teach the freshmen English Compositions courses are quite willing to see changes made in the teaching of research skills that will have an impact upon the other courses throughout the undergraduate and graduate programs.

Outcomes must continue to be measured in the future. The success of additional hours of research skills instruction will come when students produce papers and oral presentations that reflect adequate use

of library resources and related competencies in research skills.

Conclusions

It was discovered that there was no significant difference in the results of the post-test between those who were taught for one hour and those who received instruction for three hours in library research skills. The research hypothesis was not proved and the null hypothesis was proven to be correct in this experiment. Their post-test results were substantially the same which is supported by the use of a one-tailed test. In other words, we must fail to reject the null hypothesis, as there is not sufficient evidence to support the research hypothesis.

There are at least five reasons for why the research hypothesis was not proved. First of all, the testing instrument may not have accurately reflected the improvement in research skills for those students who attended the three hours of instruction. Second, the curriculum and worksheets may have not been adequate enough to produce the desired results.

Third, there may have been a difference in the way that the professors supported the giving of the post-

test. One professor did not encourage participation like the other two. Fourth, there was almost 100 percent participation in the experiment by those students who attended the one hour of instruction, but there were a number of students in the other two classes who did not attend all three of the sessions on research skills instruction. Fifth, the treatment itself did not seem to work.

Different testing instruments and the gathering of data for at least two more years will be required before reaching any further conclusions. This experiment must be pursued in spite of the results that were received at this time.

Implications

The faculty and administration would do well to examine the need for additional instruction in research skills. Course assignments that encourage research skills, critical thinking skills, and presentation skills should be considered in the traditional undergraduate and graduate programs. Students who have completed at least three hours of research skills instruction will serve as advertisements on how effective and practical this instruction can be by the

quality of the written work that is read by the faculty. The director and staff of the Learning Resource Center also need to be involved in the design and implementation of new academic programs at the college.

Research skills instruction need to be included in the drafting of the curriculum and the purchase of resources that would support the new programs.

Recommendations

It is recommended that the administration and faculty of the college work with the director of the Learning Resource Center in revising the assignments given in courses throughout the college curriculum. Changes would include research skills components, the demand for critical thinking, and the provision for innovative ways to promote presentation skills.

It is recommended that workshops be given by outside experts in the fields of curriculum development that would promote research skills instruction and critical thinking skills. The office of the academic dean could make these arrangements with the assistance of the director of the Learning Resource Center.

It is recommended that the faculty academic

affairs committee and the office of the academic dean bring to the faculty a specific timetable for design, implementation, and review of an information literacy program by the end of this calendar year. This information literacy program must be comprehensive, practical, and focused upon the improvement of educational practice at Philadelphia College of Bible.

It is recommended that a copy of this practicum report be distributed to all faculty members at Philadelphia College of Bible. Faculty members should be encouraged to not only read the document, but be given the opportunity to discuss its findings, conclusions, and recommendations.

It is also recommended that further study be done on the research skills component of information literacy and how it could be measured. Basic outcomes will need to be drafted and approved by the faculty with the cooperation of the administration. The director of the Learning Resource Center will be expected to continue to lobby for further growth and improvement in this area.

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APPENDIXES

Appendix A

Pre-test

Research Skills Examination

Masland Learning Resource Center

Philadelphia College of Bible

Name: _____ Date: _____

Multiple choice: Circle the letter for the best response to each question.

Example: We normally eat breakfast-
a. in the afternoon c. at night
b. in the morning d. at noon

1. In knowing how to find things in the library, you must have-
a. a television b. a strategy
c. a tour of the library d. a librarian

2. In knowing where to find things in the library, you can go-
a. on a tour of the library b. to a teacher
c. make decisions d. to a librarian

3. When you begin your research, you need to define your terms. You start with the-
a. card catalog b. circulation desk
c. reference collection d. periodical indexes

4. When you want to look for books and other resources in the library, you use the-
a. catalog b. telephone book
c. indexes d. encyclopedias

5. When you want to get an idea about what you are working on, you look in the-
a. reference collection b. almanacs
c. catalog d. indexes

6. When you want to broaden your horizon, you use the main or book collection. This should never be the _____ step.
a. third b. second
c. easy d. first

7. If you have to work on something current or fairly recent, you need to use the _____ collection.
a. periodical b. encyclopedia
c. computer software d. reference

8. You can find subject headings, key words, and other important words related to your topic in:
a. catalogs b. encyclopedias
c. encyclopedias and dictionaries d. thesaurus

9. When using the periodical collection, we must use an _____ to find the articles related to our subject.
a. catalog b. notebook
c. encyclopedia d. index

10. When we use the term "periodical", we are referring to_____ and _____.
a. magazines, journals b. books, newspapers
c. newspapers, directories d. encyclopedias, dictionaries

11. When searching the catalog, you can look for books and other resources under-
a. call number, author, and catalog number
b. author, title, and subject
c. author, title, and periodical
d. call number, subject, and author

12. When you locate a book in the catalog, you must copy down the_____ before going to the shelves to find it.
a. publisher information b. call number
c. classification number d. author code

13. When searching subjects found in the catalog, you should use the subject headings or key words that were found when you used the _____ collection.
a. main b. periodical
c. circulation d. reference

14. If you are using an index to find periodical articles on your topic, you should refer to the _____ and _____ located in the front of the index.
a. examples, abbreviations b. instructions, codes
c. guidelines, codes d. guidelines, abbreviations

15. The best strategy in approaching your research in the library is to begin first with the _____ collection to define your terms, move next to the _____ collection, and then finish with the _____ collection for current information.
a. reference, periodical, main
b. reference, main, periodical
c. main, reference, periodical
d. periodical, main, reference

Appendix B

Post-test

Research Skills Examination

Masland Learning Resource Center

Philadelphia College of Bible

Name: _____ Date:_____

Multiple choice: Circle the letter for the best response to each question.

Example: We normally eat breakfast-
a. in the afternoon c. at night
b. in the morning d. at noon

1. In knowing how to find things in the library, you must have-
a. a television b. a strategy
c. a tour of the library d. a librarian

2. In knowing where to find things in the library, you can go-
a. on a tour of the library b. to a teacher
c. make decisions d. to a librarian

3. When you begin your research, you need to define your terms. You start with the-
a. card catalog b. circulation desk
c. reference collection d. periodical indexes

4. When you want to look for books and other resources in the library, you use the-
a. catalog b. telephone book
c. indexes d. encyclopedias

5. When you want to get an idea about what you are working on, you look in the-
a. reference collection b. almanacs
c. catalog d. indexes

6. When you want to broaden your horizon, you use the main or book collection. This should never be the _____ step.
a. third b. second
c. easy d. first

7. If you have to work on something current or fairly recent, you need to use the _____ collection.
a. periodical b. encyclopedia
c. computer software d. reference

8. You can find subject headings, key words, and other important words related to your topic in:
a. catalogs b. encyclopedias
c. encyclopedias and dictionaries d. thesaurus

9. When using the periodical collection, we must use an _____ to find the articles related to our subject.
a. catalog b. notebook
c. encyclopedia d. index

10. When we use the term "periodical", we are referring to_____ and _____.
a. magazines, journals b. books, newspapers
c. newspapers, directories d. encyclopedias, dictionaries

11. When searching the catalog, you can look for books and other resources under-
a. call number, author, and catalog number
b. author, title, and subject
c. author, title, and periodical
d. call number, subject, and author

12. When you locate a book in the catalog, you must copy down the_____ before going to the shelves to find it.
a. publisher information b. call number
c. classification number d. author code

13. When searching subjects found in the catalog, you should use the subject headings or key words that were found when you used the _____ collection.
a. main b. periodical
c. circulation d. reference

14. If you are using an index to find periodical articles on your topic, you should refer to the _____ and _____ located in the front of the index.
a. examples, abbreviations b. instructions, codes
c. guidelines, codes d. guidelines, abbreviations

15. The best strategy in approaching your research in the library is to begin first with the _____ collection to define your terms, move next to the _____ collection, and then finish with the _____ collection for current information.
a. reference, periodical, main
b. reference, main, periodical
c. main, reference, periodical
d. periodical, main, reference

Appendix C

Curriculum (One-hour)

SESSION ONE

Assignments due:

None.

+ I.	INTRODUCTION TO SESSION	(5 minutes)
+ II.	PRE-TEST	(10 minutes)
+ III.	RESEARCH SKILLS	(15 minutes)
+ III.	LEARNING RESOURCE CENTER TOUR	(20 minutes)

SESSION ONE

LEARNING ACTIVITIES

+ I. INTRODUCTION TO SESSION (5 minutes)

Related Assignment: None

Introduce yourself to the group. Explain that the time spent on the learning a little about research skills and the use of the Learning Resource Center or library will be invaluable while at Philadelphia College of Bible and in the future.

+ II. PRE-TEST (10 minutes)

Administer the pre-test to the class. Do not tell them that this is a special project or whatever. Simply tell them that this is a test that you want them to do their best within ten minutes.

+ III. RESEARCH SKILLS (15 minutes)

Hand out the research strategy worksheet and use the

transparency set to explain how the serious student approaches research in a library or a learning resource center. It is essential that this procedure be followed and reinforced so that the student understands clearly how vital this is in the writing of their papers.

A student needs to use the following strategy when beginning their research in the library:

1. Reference works- you must start here first!
   a. to define your topic or problem
   b. look in dictionaries and encyclopedias for definitions
   c. use this information to look elsewhere

2. Books
   a. to broaden your horizon- more information than ever before!
   b. use of computer catalog- use the terms and subject headings from your research in dictionaries and encyclopedias
   c. look for other subject headings as cross-references

3. Periodicals
   a. current discussion of the topic you are researching
   b. use of indexes- an absolute necessity if you are going to gather enough of the right kind of resources

+ IV. LEARNING RESOURCE CENTER TOUR (20 minutes)

Follow the outline of the research skills worksheet. Begin with the reference collection and point the pertinent dictionaries and encyclopedias that will be helpful. Remind them of the importance of defining their terms and looking for synonyms to work with while searching the catalog for books or looking in the indexes for articles in periodicals.

Go to a computer catalog and demonstrate its use. Ask for volunteers to search for subjects. Point out the cross-references on the bibliographic record.

Go to the periodical collection and point out the three main divisions within the collection, such as the current periodicals, the back issues, and the index row. Remind them of the importance of checking in the front of the indexes for abbreviations. Also point out the black notebooks that give a listing of holdings in the LRC.

Before you dismiss the students, make sure that they understand that they will need to do the following before the next time that they meet with you:

1. Review the lecture.
2. Look over the worksheet in preparation for the quiz.
3. Be prepared to take a ten-minute quiz.

Appendix D

Curriculum (Three-hour)

SESSION ONE

Assignments due:

None.

+ I. INTRODUCTION TO SESSION (5 minutes)

+ II. PRE-TEST (10 minutes)

+ III. RESEARCH SKILLS (15 minutes)

+ III. LEARNING RESOURCE CENTER TOUR (20 minutes)

SESSION ONE

LEARNING ACTIVITIES

+ I. INTRODUCTION TO SESSION (5 minutes)

Related Assignment: None

Introduce yourself to the group. Explain that the time spent on the learning a little about research skills and the use of the Learning Resource Center or library will be invaluable while at Philadelphia College of Bible and in the future.

+ II. PRE-TEST (10 minutes)

Administer the pre-test to the class. Do not tell them that this is a special project or whatever. Simply tell them that this is a test that you want them to do their best within ten minutes.

+ III. RESEARCH SKILLS (15 minutes)

Hand out the research strategy worksheet and use the

transparency set to explain how the serious student approaches research in a library or a learning resource center. It is essential that this procedure be followed and reinforced so that the student understands clearly how vital this is in the writing of their papers.

A student needs to use the following strategy when beginning their research in the library:

1. Reference works- you must start here first!
   a. to define your topic or problem
   b. look in dictionaries and encyclopedias for definitions
   c. use this information to look elsewhere

2. Books
   a. to broaden your horizon- more information than ever before!
   b. use of computer catalog- use the terms and subject headings from your research in dictionaries and encyclopedias
   c. look for other subject headings as cross-references

3. Periodicals
   a. current discussion of the topic you are researching
   b. use of indexes- an absolute necessity if you are going to gather enough of the right kind of resources

+ IV. LEARNING RESOURCE CENTER TOUR (20 minutes)

Follow the outline of the research skills worksheet. Begin with the reference collection and point the pertinent dictionaries and encyclopedias that will be helpful. Remind them of the importance of defining their terms and looking for synonyms to work with while searching the catalog for books or looking in the indexes for articles in periodicals.

Go to a computer catalog and demonstrate its use. Ask for volunteers to search for subjects. Point out the cross-references on the bibliographic record.

Go to the periodical collection and point out the three main divisions within the collection, such as the current periodicals, the back issues, and the index row. Remind them of the importance of checking in the front of the indexes for abbreviations. Also point out the black notebooks that give a listing of holdings in the LRC.

Before you dismiss the students, make sure that they understand that they will need to do the following before the next time that they meet with you:

1. Review the lecture.
2. Look over the worksheet in preparation for the quiz in two weeks.

SESSION TWO

Assignments due:

1. Review of research skills worksheet.

+ I. REVIEW OF SESSION ONE (10 minutes)

+ II. RESEARCH SKILLS (20 minutes)

+ III. LEARNING RESOURCE CENTER TIME (20 minutes)

SESSION TWO

LEARNING ACTIVITIES

+ I. REVIEW OF SESSION ONE (10 minutes)

Related Assignment: Review of research skills worksheet.

Orally quiz the class on the research strategy presented in session one. Use the transparencies to work through why you must start with the reference collection. Work through the strategies in searching the catalog and then review the use of the periodical collection with the indexes.

+ II. RESEARCH SKILLS (20 minutes)

Hand out the catalog worksheet and use the transparency set to explain how the serious student approaches the catalog in a library or a learning resource center. It is essential that this procedure be followed and reinforced so that the student understands clearly how vital this is in searching for materials in preparing to write their papers.

A student needs to understand the following terminology when using the catalog:

1. Classification systems-
   a. Dewey decimal classification system
   b. Library of Congress classification system

2. Call numbers-
   a. Classification number- the number that comes first, such as 223.2
   b. Author number or Cutter number- the second line of a call number that refers to the author
   c. Copyright or year of publication- the third line that tells you when the book or item was produced, published, or printed.

Continue with the worksheet by having the students answer questions 4 and 5 orally. Encourage them strongly to write down their answers at this time.

Turn to the second page of the catalog worksheet and answer questions 6 and 7 with the students. Answer any questions that may come up at this time.

+ III. LEARNING RESOURCE CENTER TIME (20 minutes)

Allow the students to work on question 8. Remind them that they must fill out the worksheet completely, with full citations. They are not to leave the LRC until they have completed the worksheet and have shown the instructor their answers.

Before you dismiss the students, make sure that they understand that they will need to do the following before the next time that they meet with you:

1. Review the lecture.
2. Look over the worksheet in preparation for the quiz next week.

SESSION THREE

Assignments due:

1. Review of research skills worksheet.
2. Review of catalog worksheet.

+ I.	REVIEW OF SESSIONS ONE AND TWO	(15 minutes)
+ II.	RESEARCH SKILLS	(15 minutes)
+ III.	LEARNING RESOURCE CENTER TIME	(20 minutes)

SESSION THREE

LEARNING ACTIVITIES

+ I. REVIEW OF SESSIONS TWO AND THREE (15 minutes)

Related Assignment: Review of research skills worksheet and catalog worksheet.

Orally quiz the class on the research strategy presented in session one. Use the transparencies to work through why you must start with the reference collection. Work through the strategies in searching the catalog and then prepare to present the use of the periodical collection with the indexes.

+ II. RESEARCH SKILLS (15 minutes)

Hand out the periodicals worksheet and use the transparency set to explain how the serious student approaches the periodicals in a library or a learning resource center. It is essential that this procedure be followed and reinforced so that the student understands clearly how vital this is in searching for materials in preparing to write their papers.

A student needs to understand the following terminology when using the periodicals:

1. Index-
   a. alphabetical listing of subjects
   b. list of periodicals covered in front of index
   c. includes authors, titles, date, pages, etc.

2. Abstract-
   a. alphabetical listing of subjects
   b. not as comprehensive
   c. also includes a brief description of article

Walk through the worksheet after having explained the difference between indexes and abstracts. Examples need to be given while walking through the worksheet. Especially give examples as to what is demanded of you in the last exercise where students will have to physically handle periodicals and do a quick assessment.

+ III. LEARNING RESOURCE CENTER TIME (20 minutes)

Allow the students to ask questions before they are dismissed to complete the worksheet. Remind them that they must fill out the worksheet completely, with full answers. They are not to leave the LRC until they have completed the worksheet and have shown the instructor their answers.

Before you dismiss the students, make sure that they understand that they will need to do the following before the next time that they meet with you:

1. Review the lecture.
2. Look over all three worksheets in preparation for the quiz next class period.

Appendix E

Worksheet (One-hour)

Research Skills Worksheet

Masland Learning Resource Center

Philadelphia College of Bible

You need to know:

1. HOW to find things -- strategy

2. WHERE to find things -- library or LRC tour

What is your topic?

You need to have a strategy:

1. Define your terms -- use the _____ collection. In other words, you are going to look in encyclopedias and dictionaries to get an idea about what you are working on.

What did you find (key words, bibliography)?

2. Broaden your horizon -- use the _____ collection. This should never be the first step. This is where you get to use the computer catalog.

What subject headings did you use?

What results did you get?

3. Keeping current -- use the _____ collection. This step is not the easiest, but you can learn how. Keep in mind that this area requires a lot of work and some patience. You must use indexes!

Which subject headings are you going to use?

Which indexes are you going to use?

Which "black notebook" are you going to use?

Some additional tips:

1. When looking for Bible references, you must look under "Bible--OT--Genesis" for something in Genesis. What would it be for something in Romans?

2. Look for materials outside the library. Literature can be obtained at organizations such as embassies, travel agencies, etc. Use the telephone book.

3. Look for information from other people. Ask a librarian or ask for help from other people who may be experts in that area.

Appendix F

Worksheets (Three-hour)

Research Skills Worksheet

Masland Learning Resource Center

Philadelphia College of Bible

You need to know:

1. HOW to find things -- strategy

2. WHERE to find things -- library or LRC tour

What is your topic?

You need to have a strategy:

1. Define your terms -- use the _____ collection. In other words, you are going to look in encyclopedias and dictionaries to get an idea about what you are working on.

What did you find (key words, bibliography)?

2. Broaden your horizon -- use the _____ collection. This should never be the first step. This is where you get to use the computer catalog.

What subject headings did you use?

What results did you get?

3. Keeping current -- use the _____ collection. This step is not the easiest, but you can learn how. Keep in mind that this area requires a lot of work and some patience. You must use indexes!

Which subject headings are you going to use?

Which indexes are you going to use?

Which "black notebook" are you going to use?

Some additional tips:

1. When looking for Bible references, you must look under "Bible--OT--Genesis" for something in Genesis. What would it be for something in Romans?

2. Look for materials outside the library. Literature can be obtained at organizations such as embassies, travel agencies, etc. Use the telephone book.

3. Look for information from other people. Ask a librarian or ask for help from other people who may be experts in that area.

Catalog Worksheet

Masland Learning Resource Center

Philadelphia College of Bible

1. There are two major classification systems in use in libraries in and around the PCB world. They are known as the:

(a) _____ _____

Classification System, and the

(b) _____ ____ _____

Classification System.

2. Which classification system is used in the PCB LRC?

3. Below is a call number. Identify its components.

223.2 _____

B47 _____

1992 _____

4. Where would you look to find other subject headings for a topic that you are researching?

5. Why is it important to use the reference collection first when gathering information for a project or assignment?

Your topic is "abortion".

6. Where would you look in the reference collection for a definition of "abortion"?

7. Where would you look for background information on the history of abortion in the United States?

8. Look in the computer catalog of the LRC. What subject heading(s) would you use for the topic? What did you find?

Periodicals Worksheet

Masland Learning Resource Center

Philadelphia College of Bible

1. What is the difference between an index and an abstract?

2. Locate and write down the titles to one index and one abstract in our LRC.

3. Look up the subject "leadership" in two indexes. Cover at least two years in your search with each index. How many references did you find?

4. Note below two citations that seem related to the subject.

5. What problems did you find and/or what advice would you give someone else looking for the same subject as you?

6. Locate five journals and/or magazines in your major. List their titles in the chart below.

7. Conduct an assessment regarding each of the titles in the chart below: (In other words, how valuable to you for a research project?)

Title	Frequency	Assessment
1.		
2.		
3.		
4.		
5.		

Appendix G

Test Scores From One-Hour Class

Date	Course Title	Professor	# of Students
9/14/94	EN 131 English Comp	Minto, Jean	27

Name of Student	Pre-test	Post-test	Difference
A1	12	13	+1
A2	9	12	+3
A3	12	13	+1
A4	11	14	+3
A5	13	14	+1
A6	9	14	+5
A7	9	15	+6
A8	11	13	+2
A9	8	9	+1
A10	11	15	+4
A11	7	11	+4
A12	11	14	+3
A13	6	7	+1
A14	12	12	0
A15	10	9	-1
A16	10	14	+4
A17	11	11	0
A18	14	13	-1
A19	10	15	+5
A20	7	10	+3

A21	9	14	+5
A22	12	12	0
A23	11	14	+3
A24	4	7	+3
A25	4	12	+8
A26	6	15	+9
A27	10	9	-1
Mean	9.59	12.26	+2.67
Median	10	13	+3
Range	10	8	10

Test Scores From Three-Hour Class

Date	Course Title	Professor	# of Students
9/26/94	EN 131 English Comp	Laing, Howard	13

Name of Student	Pre-test	Post-test	Difference
B1	9	13	+4
B2	12	15	+3
B3	7	11	+4
B4	11	13	+2
B5	7	8	+1
B6	5	9	+4
B7	10	13	+3
B8	10	13	+3
B9	11	14	+3
B10	10	10	0
B11	9	14	+5
B12	8	13	+5
B13	9	13	+4
Mean	9.08	12.23	+3.15
Median	9	13	+3
Range	7	7	5

Test Scores From Three-Hour Class

Date	Course Title	Professor	# of Students
9/27/94	EN 131 English Comp	Laing, Howard	17

Name of Student	Pre-test	Post-test	Difference
C1	10	12	+2
C2	8	12	+4
C3	8	12	+4
C4	8	11	+3
C5	8	11	+3
C6	10	9	-1
C7	8	12	+4
C8	12	14	+2
C9	12	13	+1
C10	9	11	+2
C11	8	15	+7
C12	10	14	+4
C13	11	12	+1
C14	7	13	+6
C15	13	13	0
C16	7	11	+4
C17	9	11	+2
Mean	8.24	12.12	+2.82
Median	9	12	+3
Range	6	6	8

Test Scores From One-Hour Class

Date	Course Title	Professor	# of Students
9/28/94	EN 131 English Comp	Mayk, Renee	27

Name of Student	Pre-test	Post-test	Difference
D1	11	14	+3
D2	9	13	+4
D3	7	13	+6
D4	12	14	+2
D5	7	11	+4
D6	10	10	0
D7	12	13	+1
D8	5	10	+5
D9	10	13	+3
D10	10	14	+4
D11	8	14	+6
D12	13	14	+1
D13	11	13	+2
D14	9	15	+6
D15	12	15	+3
D16	10	14	+4
D17	11	14	+3
D18	9	11	+2
D19	9	13	+4
D20	7	13	+6
D21	7	14	+7
D22	9	11	+2

D23	9	13	+4
D24	13	14	+1
D25	8	14	+6
D26	11	13	+2
D27	10	15	+5
Mean	9.67	13.15	+3.56
Median	10	13	+4
Range	8	5	7